ABSTRAK

Astrida Puspita Sari, 2018, Studi Eksperimental Tekuk Lokal Batang Baja Ringan Canai Dingin

Struktur baja ringan canai dingin kini menjadi alternatif pilihan di dalam dunia konstruksi gedung karena bobotnya ringan, cepat dan mudah dikonstruksi. Studi ini melakukan kajian tekuk lokal pada baja ringan canai dingin profil-C. Tekuk lokal profil-C dianalisis secara analisis menggunakan SNI 7971:2013, numerik dengan Abaqus dan Eksperimental saat pembebanan sentris (COG) dan eksentris (ECC). Hasil analisis menggunakan SNI 7971:2013 lebih besar 12.37% untuk COG dan 31,52% untuk ECC dibanding analisis Metode Elemen Hingga (MEH) saat pembebanan sentris dan tidak sentris yang diverifikasi secara eksperimental. Pada kasus profil-C dibebankan eksentris kapasitas tekuk lokal mengalami penurunan sebanyak 21% dibanding pembebanan sentris

Kata Kunci : SNI 7971:2013, Metoda Elemen Hingga (MEH), Eksperimental, Tekuk Lokal, Baja Ringan Canai Dingin.

ABSTRACT

Astrida Puspita Sari, 2018, ***Experimental Study of Local Buckling Cold-formed Steel***

Cold-formed steel structure is the most chosen alternative in the world of building construction nowadays, because of its light weight, fast and easy to construct. This study conducted local buckling study on cold-formed steel channel section. The local buckling of cold-formed steel channel section was analyzed analytically using SNI 7971: 2013, numerically with Abaqus and Experimental at centric (COG) and eccentric (ECC) loading. The centric load calculated analytically with the formula SNI 7971: 2013 is 12.37% otherwise eccentic load 31.52% greater than the numerical analysis of the Finite Element Method (FEM) which is verified by the Experimental test. In the case of the channel section eccentric loading, the load carrying capacity decreased by 21% compared to centric loading.

Keywords: SNI 7971:2013, Finite Element Method (FEM), Experimental, Local Buckling, Cold-formed Steel.P